

CLAIMS

1. A wireless device in a wireless communication network, comprising:
a receive data processor operative to receive a first message from the wireless network for reconfiguration of uplink and downlink physical channels for a physical layer;
a controller operative to perform synchronization to establish the downlink physical channels; and
a transmit data processor operative to send a second message to the wireless network indicating completion of the synchronization for the downlink physical channels, and
wherein the receive data processor is further operative to receive an indication that the uplink physical channels have been established by the wireless network, and wherein the controller is further operative to delay transmission of signaling and data on the uplink physical channels, except for transmission of designated messages, until the indication is received from the wireless network.
2. The wireless device of claim 1, wherein the indication is an acknowledgment (ACK) sent by the wireless network in response to successful decoding of the second message by the wireless network.
3. The wireless device of claim 1, wherein the indication is derived from transmit power control (TPC) commands received from the wireless network.
4. The wireless device of claim 1, wherein the controller is operative to perform the synchronization starting at an activation time indicated by the first message.
5. The wireless device of claim 1, wherein the controller is operative to, for the synchronization, direct establishment of chip and frame timing for the downlink physical channels and initiate transmission of a power control preamble for a predetermined number of radio frames.

6. The wireless device of claim 1, wherein the synchronization is performed in accordance with a Synchronization procedure A defined by 3rd Generation Partnership Project (3GPP).

7. The wireless device of claim 1, wherein the first message is a *Radio Bearer Reconfiguration* message and the second message is a *Radio Bearer Reconfiguration Complete* message defined by 3GPP.

8. The wireless device of claim 1, wherein the first message is a *Transport Channel Reconfiguration* message and the second message is a *Transport Channel Reconfiguration Complete* message defined by 3GPP.

9. The wireless device of claim 1, wherein the first message is a *Physical Channel Reconfiguration* message and the second message is a *Physical Channel Reconfiguration Complete* message defined by 3GPP.

10. The wireless device of claim 1, wherein the designated messages are messages for a Radio Resource Control (RRC) layer.

11. The wireless device of claim 1, wherein the reconfiguration of the uplink and downlink physical channels is due to a change from a CELL_FACH state to a CELL_DCH state for the wireless device, the CELL_FACH and CELL_DCH states being defined by 3GPP.

12. The wireless device of claim 1, wherein the reconfiguration of the uplink and downlink physical channels is due to a change in configuration for the wireless device within a CELL_DCH state defined by 3GPP.

13. An integrated circuit comprising:
a receive data processor operative to receive a first message from a wireless communication network for reconfiguration of uplink and downlink physical channels for a physical layer;

a controller operative to perform synchronization to establish the downlink physical channels; and

a transmit data processor operative to send a second message to the wireless network indicating completion of the synchronization for the downlink physical channels, and

wherein the receive data processor is further operative to receive an indication that the uplink physical channels have been established by the wireless network, and wherein the controller is further operative to delay transmission of signaling and data on the uplink physical channels, except for transmission of designated messages, until the indication is received from the wireless network.

14. An apparatus in a wireless communication network, comprising:

means for receiving a first message from the wireless network for reconfiguration of uplink and downlink physical channels for a physical layer;

means for performing synchronization to establish the downlink physical channels;

means for sending a second message to the wireless network indicating completion of the synchronization for the downlink physical channels;

means for receiving an indication that the uplink physical channels have been established by the wireless network; and

means for delaying transmission of signaling and data on the uplink physical channels, except for transmission of designated messages, until the indication is received from the wireless network.

15. The apparatus of claim 14, wherein the means for performing synchronization includes

means for establishing chip and frame timing for the downlink physical channels, and

means for transmitting a power control preamble for a predetermined number of radio frames.

16. A method of transmitting signaling and data in a wireless communication network, comprising:

receiving a first message from the wireless network for reconfiguration of uplink and downlink physical channels for a physical layer;

performing synchronization to establish the downlink physical channels;

sending a second message to the wireless network indicating completion of the synchronization for the downlink physical channels;

receiving an indication that the uplink physical channels have been established by the wireless network; and

delaying transmission of signaling and data on the uplink physical channels, except for transmission of designated messages, until the indication is received from the wireless network.

17. A wireless device in a UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network (UTRAN), comprising:

a receive data processor operative to receive a *Reconfiguration* message from the UTRAN for reconfiguration of uplink and downlink physical channels;

a controller operative to perform Synchronization procedure A, defined by 3GPP, to establish the downlink physical channels; and

a transmit data processor operative to send a *Reconfiguration Complete* message to the UTRAN indicating completion of the Synchronization procedure A for the downlink physical channels, and

wherein the receive data processor is further operative to receive a Layer 2 acknowledgment (L2 ACK) sent by the UTRAN in response to successful decoding of the *Reconfiguration Complete* message, and wherein the controller is further operative to delay transmission of signaling and data on the uplink physical channels, except for transmission of messages for Radio Resource Control (RRC) signaling radio bearers, until the L2 ACK is received from the wireless network.

18. A base station in a wireless communication network, comprising:

a transmit data processor operative to send a first message to a wireless device for reconfiguration of uplink and downlink physical channels for a physical layer;

a controller operative to perform synchronization to establish the uplink physical channels; and

a receive data processor operative to receive a second message from the wireless device indicating that the downlink physical channels have been established by the wireless device, and

wherein the controller is operative to delay transmission of signaling and data on the downlink physical channels, except for transmission of designated messages, until the second message is received from the wireless network.

19. The base station of claim 18, wherein the controller is operative to, for the synchronization, direct establishment of chip and frame timing for the uplink physical channels.

20. The base station of claim 18, wherein the first message is a *Radio Bearer Reconfiguration* message and the second message is a *Radio Bearer Reconfiguration Complete* message defined by 3GPP.

21. The base station of claim 18, wherein the reconfiguration of the uplink and downlink physical channels is due to a change from a CELL_FACH state to a CELL_DCH state for the wireless device, the CELL_FACH and CELL_DCH states being defined by 3GPP.

22. The base station of claim 18, wherein the reconfiguration of the uplink and downlink physical channels is due to a change in configuration for the wireless device within a CELL_DCH state defined by 3GPP.

23. An apparatus in a wireless communication network, comprising:
means for sending a first message to a wireless device for reconfiguration of uplink and downlink physical channels for a physical layer;
means for performing synchronization to establish the uplink physical channels;
means for receiving a second message from the wireless device indicating that the downlink physical channels have been established by the wireless device; and
means for delaying transmission of signaling and data on the downlink physical channels, except for transmission of designated messages, until the second message is received from the wireless network.

24. A method of transmitting signaling and data in a wireless communication network, comprising:

sending a first message to a wireless device for reconfiguration of uplink and downlink physical channels for a physical layer;

performing synchronization to establish the uplink physical channels;

receiving a second message from the wireless device indicating that the downlink physical channels have been established by the wireless device; and

delaying transmission of signaling and data on the downlink physical channels, except for transmission of designated messages, until the second message is received from the wireless network.